

## 0 MG CIGARETTES: THE TECHNICAL AND POPULAR LITERATURE

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The trend toward low-tar cigarettes has not gone unnoticed in the trade and popular press. Low-tar brands have been classified as those producing <14 mg/cigarette, and this type has been around for years. There has even been a super-low-tar brand on the market since 1964, Carlton at 4 mg. Carlton and the other low-tar brands, however, rarely received special attention in the press.

But in 1976 the low-tar derby gained attention when R.J. Reynolds' Now king-size (2 mg tar) attacked American Brands' Carlton 70's (1 mg tar), and Philip Morris's Merit king-size (9 mg tar) entered the competition as a full-flavor low-tar brand. Since that time low-tar cigarettes have made most of the news. In an article in Newsweek shortly after the introduction of Now, Carlton, and Merit, the underlying principal of isolating natural flavor constituents from high-tar tobacco smoke and using them as additives in Merit was disclosed. Newsweek concluded: "It's now possible to get below 1 milligram of tar; if taste additives can be developed for such cigarettes, the successful developers will really have something. They could call it Ultimate"<sup>3</sup>.

In the mid-1970's there was a lot of activity in the nontobacco smoking material area, notably in Europe where NSM (Imperial) and Cytrel (Celanese) were being used to make up substantial portions of the cigarette blend. These materials claimed to deliver one-third to one-seventh the normal tar level. For example, as one trade journal detailed it<sup>1</sup>:

1. NSM produces less than one-third as much tar;
2. NSM produces not just less tar, but tar which is about one-third as biologically active, when measured by a standard mouse skin painting technique;
3. NSM produces a less irritant smoke.

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There have been a variety of brands containing nontobacco materials in and out of the European market, but the brand lowest in tar appears to be Extra Mild Silk Cut (substitute version) with 2.8 mg tar.

The National Cancer Institute's Smoking and Health Program has produced a series of experimental cigarettes using various techniques for reducing tar and nicotine content. Their Series IV cigarette is "extremely low in tar (2.71 mg/cigarette). Series V represents a 'chemical' cigarette containing no tobacco and, therefore, no tar"<sup>2</sup>. A description of this tobacco-less cigarette is available at Philip Morris R&D, if necessary.

There, of course, are any number of additives, filters, and variations in cigarette construction that alter the delivery of a standard cigarette. These variables are covered by the patent literature. One recent claim that has neither been patented nor described in any detail was made a couple of years ago by Guynatal Pharmaceutical Corporation in Greensboro, North Carolina. They announced a "hungry cell serum that consumes nicotine and tars from tobacco and could result in a safe cigarette...the serum could be mixed with tobacco in cigarettes or could be included in filters"<sup>4</sup>. No more has been heard from Guynatal since these preliminary announcements in 1978.

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<sup>1</sup>British big 3 launch major drive for tobacco substitute cigarettes. Tobacco International (22 July 1977), 27-37.

<sup>2</sup>Gori, Gio B. Less hazardous cigarettes. Prevention and Detection of Cancer; Proceedings of the International Symposium; 3rd (1976): 791-804.

<sup>3</sup>Langway, Lynn and Pamela Ellis Simons. Cigarettes: the low-tar derby. Newsweek (19 January 1976), 67-68.

<sup>4</sup>A Serum that may or may not work. Tobacco International (22 December 1978), 71.

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